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*Digest*

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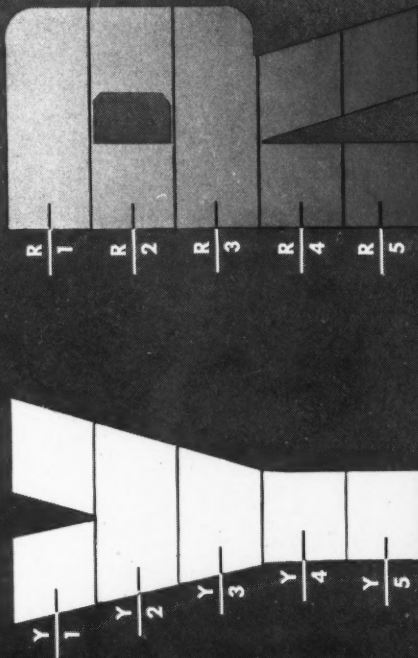
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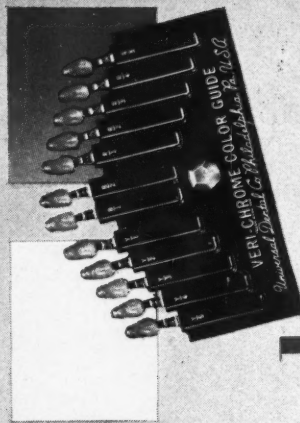
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# THE DENTAL Digest

VOL. 49

NO. 9

## SEPTEMBER 1943

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THE PROPER APPROACH TO ROENTGENOGRAPHY. In this issue he discusses THE ANODE-FILM DISTANCE IN INTRA-ORAL ROENTGENOGRAPHY.

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PROBLEMS OF CHILDREN; and several dental periodical articles, including one in this magazine back in February, 1932 on HOW TO MAKE AN X-RAY TABLE FOR DENTAL USE; and he has read many papers before society meetings. His specialties are roentgenography and oral surgery, and he has been interested in research problems concerning electrical potentialities of dental metals and alloys.

OTTO MEYER, M.D. is the author of numerous articles and of two books: one on RHEUMATISM; the other, on PHLEBITIS. THE DENTAL DIGEST has carried his articles on THE MECHANISM OF ORAL FOCAL INFECTION (June, 1940) and FOCAL INFECTION AND ESSENTIAL HYPERTENSION (January, 1942). Doctor Meyer continues his interest in this issue with FOCAL INFECTION AND IDIOPATHIC EPILEPSY. The drawing accompanying the article was especially prepared by our artist, Mr. Melville Steinfelds.

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# Preformed Tin Patterns for Crown Preparation

JOHN J. RUHLAND, D.D.S., Milwaukee

WITH 144 ANATOMIC tooth patterns of upper and lower centrals, laterals, cuspids, bicuspid, and molars, preformed from a sheet of 27 gauge tin, it has been possible to eliminate endless hours of wax carving and still obtain uniformly satisfactory crowns, tightly fitting at the gingival margins. All the tooth anatomy is provided with the tin tooth form. Instead of only a band for a wax impression the band and tooth are had already carved. These patterns may be used for full-cast, three-quarter, and jacket crowns.

## Materials

The materials consist of a shell machine for the preparation of the assorted size shells, used in the preparation of the various tin crown forms, and the sharp crown outfit. In this outfit are 144 rubber models of the teeth in various sizes and forms, a split die former, a tray for additional prepared tin crowns, and discs of tin for preparation of tin shells.

## Technique

1. A shell is formed from a round piece of tin, one-half to 1 inch in diameter, according to the size of shell to be prepared (Fig. 1).

2. Rubber tooth mold is used to pour a split die in Dee's low-fusing master model metal (Fig. 1).

3. The tin shell is swaged into place in the metal die by the use of an instrument and soft unvulcanized rubber. Care should be taken at this point to see that the anatomy on the occlusal surface of the tin crown is faithfully reproduced by proper adaptation of the tin form to the die. This step should be undertaken slowly in order that holes will not be punched through the tin shell during adaptation. The crown form is then eliminated by opening the split die. Numerous crown forms may be made from a single die (Fig. 1).

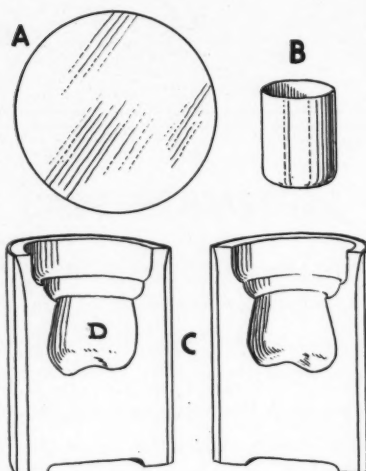


Fig. 1—Tin disc (A) formed into shell (B) by means of shell machine. Shell (B) then swaged into split die (C) to form tin crown. D is the rubber tooth form.

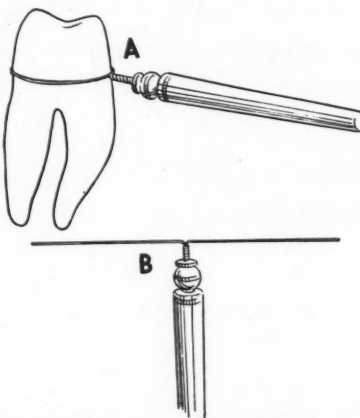


Fig. 2—Wire measurement taken around gingival of tooth (A). Split wire measurement (B) compared with wire measurement chart to choose correct size tin crown.

4. The tooth is prepared in the customary manner (Fig. 2).

5. A wire measurement is taken around the gingival of the tooth (Fig. 2).

6. The tin crown is selected in the proper size from the measurement chart.

7. This tin crown is fitted on the tooth (Fig. 3), burnished into place, and trimmed with a knife.

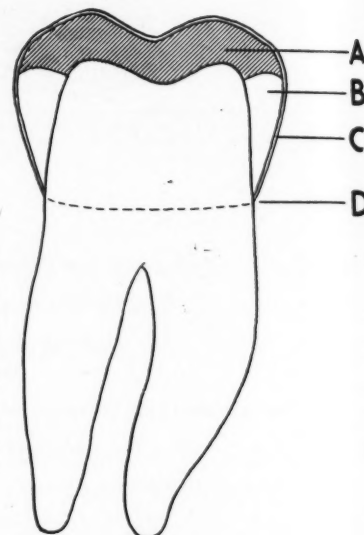


Fig. 3—A, Soft inlay wax used as a filler; B, excess wax carved out around the bell of the tooth with a spoon excavator leaving tin crown form exposed; C, crown form of 27 gauge tin; D, burnish or carve edge of tin crown to tapering finish.

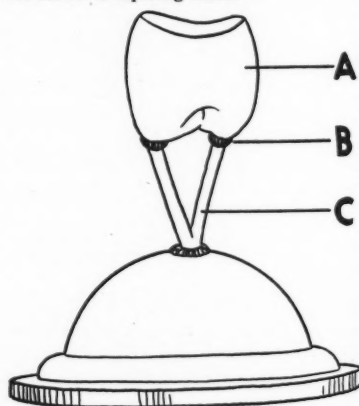


Fig. 4—Sprue and mount bicuspid crown. A, Fitted tin crown; B, sticky wax; C, 14 gauge wax sprue.

8. With the fitting complete, have the patient bite for occlusion.

9. Remove the crown and drop inlay wax on the inner occlusal surface. Heat the wax until it is soft; return on the tooth, and again have the patient bite for occlusion.

10. Remove and examine the wax impression for details, especially the



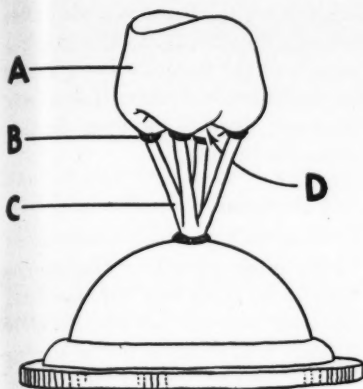


Fig. 5—Sprue and mount molar crown. A, Fitted tin crown; B, sticky wax; C, 14 gauge sprues. D, Care should be taken in investing to prevent trapping of air bubbles at this point.

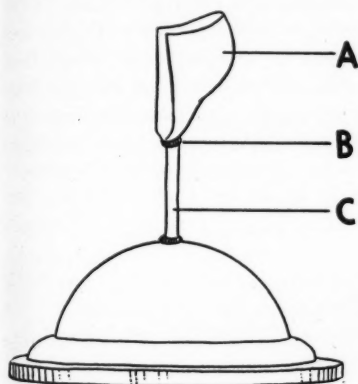


Fig. 6—Sprue and mount three-quarter crown. A, Fitted tin three-quarter crown (with labial cut out); B, sticky wax; C, 14 gauge wax sprue.

fissures on the occlusal surface of the tooth.

11. If the wax is satisfactory, carve away all excess wax at the bell of the tooth, down to the tin, by use of a spoon excavator. The occlusal surface wax should be left intact (Fig. 3, A). This hollow space when filled with cement is a good non-conductor and saves gold.

12. Replace on tooth for final inspection of occlusion and of gingival margins. Remove and sprue with 14 gauge wax sprues on cusps as shown in Figs. 4, 5, and 6.

13. Invest and cast as outlined below.

### Investing

1. Put 14 to 18 gauge wax sprue on each high cusp and bring them all to one (Figs. 4, 5, and 6).

2. Mount on sprue former.

3. Beware of air bubbles while investing, especially in the occlusal fissures and at the place of attachment of wax sprues.

4. Use any familiar asbestos-lined ring and investment material.

### Elimination of Tin and Wax from Mold

1. After proper setting of investment, place the ring on the heater with the sprue hole downward.

2. Use high heat, such as that from an electric or Torit heater. Turn on full force.

3. When the ring becomes red hot (about five minutes under high heat) take the ring from the heater and with sprue hole pointing downward examine to see whether tin is soft enough and appears at the sprue hole. If the tin is soft enough, tap the ring on the laboratory bench with the sprue hole downward, and the tin will drop out.

If the tin is not tapped out, and heating is continued, the tin will run out of its own accord and drop to the bottom of the heater.

4. Put the ring back on the heater and continue heating at high heat until the sprue hole becomes cherry red.

5. Have the gold casting machine ready. The ring is taken from the heater, and with sprue hole pointing downward, the ring is tapped on the bench again several times to be sure that all the tin is out. These steps must be done rapidly, so that the ring will not become too cool.

6. Place the ring in the casting machine and cast.

7. When casting three-quarter crowns for centrals, laterals, and cuspids, invest them the same as the molar and bicuspid crowns; however, instead of two, three or four wax sprues, use only one large 14 gauge wax sprue placed on the incisal edge (Fig. 7).



Fig. 7—Rubber models, split die former, discs of tin for preparation of tin shells.



Fig. 8—Various preformed crowns.

### Finishing

These three-quarter crowns are made the same as full crowns. After fitting and articulating the tin tooth form, take a knife or lance and remove the labial or buccal wall of the tin crown and finish the margins with

burnisher, knife, or sandpaper discs. On the anteriors, sandpaper strips may be used to finish the interproximal spaces, the tin crown being held in place while finishing. The margins may be finished in accordance with the desired result of the finished casting, with no danger of the feather-

edges breaking. Patterns made in this manner may be comfortably manipulated with the fingers without danger of distortion (a common fault of wax patterns), because the finest feather-edges are of metal.

### Comments

These tin crowns are also excellent in the preparation of jacket crowns because the tooth may be shaped and its form seen in the mouth before baking, thus eliminating the carving of wax patterns, and of taking compound impressions.

Castings made in this manner will center themselves in the fissures on the top of the tooth. This point alone eliminates a great percentage of the trauma to the tooth and in this way tends to prevent bone destruction. Trauma, recession of the gingivae, and finally bone absorption owing to poorly fitted crowns have heretofore led to condemnation of all crowns.

4143 Plankinton Building.

## *We Can't Pay You, But—*

No dental author can ever be *paid* for a valuable technical or scientific article. The value of such material is above a monetary basis. In the preparation of a technical article, however, an author often expends money for drawings, photographs, models, or graphs. We would like to help defray some of these expenses.

*Until further notice, THE DENTAL DIGEST will allow \$25.00 toward the cost of illustrations provided by the author of every article accepted for publication.*

Before the year is out about 20,000 of our dental colleagues will be in military service. Few of them will have the time, the facilities, or the opportunities to develop new techniques or to write for the dental literature. They will be eager, however, to read of the new developments in dental science and art.

Writing articles for publication in technical journals can be a contribution to the war effort, because that is how to help our dental officers in the Army and Navy keep abreast of technical advancements, and it is one way to improve the skill and services of civilian dentists on the home front.

If you have a constructive idea, an innovation, a new result of tried and proved experiment, put it down in writing, illustrate it, and send the material to: The Editor of THE DENTAL DIGEST, 708 Church Street, Evanston, Illinois.

*We hope that you will accept this invitation!*

# Bite Raising in a Case of Acromegaly

PHIL. G. VIERHELLER, D.D.S., Saint Louis

ACROMEGALY IS A disease syndrome referable to the excessive production of the growth hormone by the cells of the anterior lobe of the pituitary gland. If this hyperfunction develops early in life, it is known as gigantism; if it continues later in life, acromegaly results. In the early stages the excessive production of this growth hormone is associated with a gradual enlargement of the hands and feet. The skin becomes progressively thickened; the palm of the hand broadened; the facial features coarsened and thickened; the skull bones show a marked thickening with consequent prominence of the supra-orbital ridges; the nose becomes overgrown and bulbous with widened nostrils; the lips thick and coarse and of Negroid character, especially the lower lip, the condition of which is emphasized by the progressive protrusion of the mandible (prognathism). The superior maxillary bones enlarge with consequent displacement and wide spacing of teeth. The jaws may match so poorly that mastication is impaired.

Coincident with the overgrowth there occurs a gross hypertrophy and furrowing of the tongue which shows indentations on the sides caused by pressure against the teeth. The hair often becomes coarse and hypertrichosis is common. There are noticeable voice changes owing to enlargement of the air sinuses of the skull and alteration in the shape of the larynx.

## Report of Case

*History and Symptoms*—A man, aged 40, complained of pain in the neck of four years' duration; neuralgia in the jaws of twelve years' duration; and of a slight blurring of vision and poor circulation in the fingers. The patient tired easily; he noticed that he was not so strong as he had previously been, and that over-exertion would cause him to be "light-headed." Over-secretion of the lacrimal ducts likewise occurred.

The patient had been under the care of his family physician for the treatment of acromegaly. He was referred to an eye specialist by his

physician because of excessive lacrimation and had received a series of roentgen treatments. He was kept under observation by his family physician from November, 1939 to February, 1942, and the last report from his physician stated that there had been considerable reaction to the last series of deep roentgen therapy, and that the progressive character of the condition had been arrested.

*Dental Procedure*—Full mouth roentgenograms revealed that complete extraction was indicated.

Impressions of the maxilla and mandible were taken in the modeling compound; plaster casts poured, and the models set on articulators with a wax bite to study the occlusion:

There was an extreme protrusion of the mandible and a closed bite. The only teeth in occlusion were on the right side of the mouth; none occluded on the left, and there was a wide space between the lower anteriors and the upper anteriors. The incisal edge of the upper right lateral tooth occluded with the lower lingual

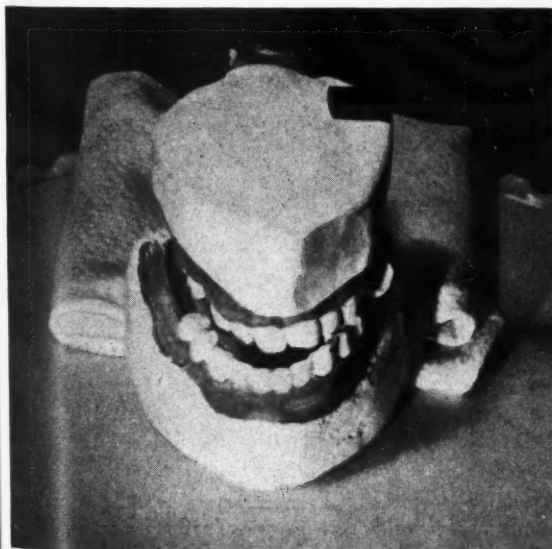


Fig. 1—Modeling compound impressions were taken; plaster casts poured, and models set on straight line articulators to study original occlusion, which was hinge type.



Fig. 2—Original occlusion of teeth with wide space between upper and lower anterior teeth and protrusion of lower jaw.





Fig. 3—Typical geographic tongue in acromegaly.



Fig. 4—Occlusion of dentures in mouth after bite was raised.

cuspid of the lower right first bicuspid. The cusp of the upper right bicuspid occluded with the sulcus between the lingual and buccal cusps of the lower

right second bicuspid. The lower right molar was missing and the mesio-buccal cusp of the upper right first molar and the buccal cusp of a

bridge pontic replacing the upper right second bicuspid occluded with the extreme lingual of the lower right second molar which had migrated

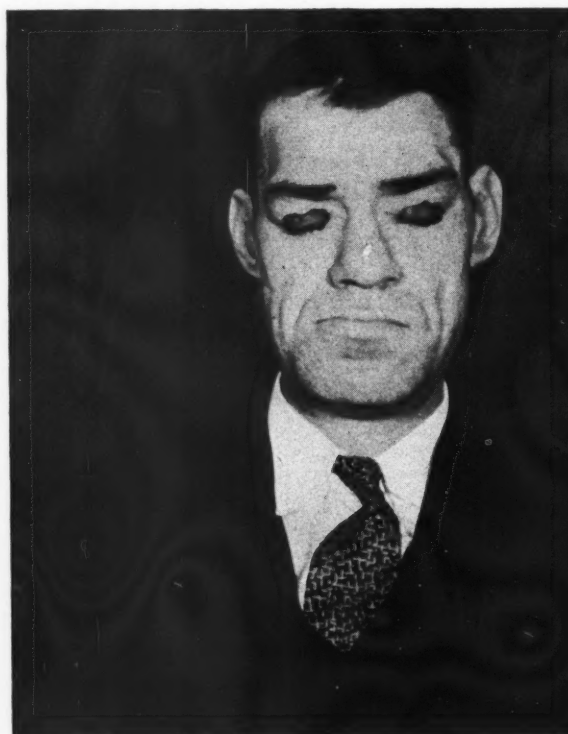


Fig. 5—Frontal view before case was treated.



Fig. 6—Frontal view after case was treated.

mesially as a result of the loss of the first molar.

1. All the remaining teeth in the upper maxilla were extracted except the six anteriors and all the remaining lower teeth except the lower right first and second bicusps. The sockets were allowed to heal with the remaining teeth holding the original occlusion.

2. Full mouth impressions were taken of the maxilla and the mandible with hydrocolloid impression material.

3. Casts were poured in stone and bite plates were made. With these bite plates the bite was raised to the desired amount directly in the mouth, and the stone models set on articulators with the bite plates on them.

The problem in the lower arch was the size of the mandible and its rela-

tion to the maxilla with the necessity to allow as much room as possible for the geographic tongue.

4. Dentsply 20 degree posterior teeth were used in the setup; the lower was set up first. The lower posterior teeth were set in the upper arch and the upper posterior teeth were set in the lower arch, making a cross-bite which permitted the uppers to be set closer to the ridge of the maxilla and still keep them in occlusion and accommodate the setup to the mandibular ridge; moreover more room was thus allowed for the tongue in the lower. The lower arch accommodated the lower six anterior teeth but in the upper arch the cuspids had to be eliminated.

5. The dentures were made in acrylic material for immediate insertion after the remaining extractions.

The patient was seen four months later when the lower was rebased and the upper rebased and reproduced; the teeth and the occlusion were left in their original position.

#### Comment

This will be an interesting case to follow, because as the condition progresses, there will be more changes taking place in the maxilla and mandibular relations; but at present the patient has a good occlusion with both lateral and protrusive excursions of the mandible, whereas originally he could only chop his food in a hinge movement with poor occlusion only on the right side and no occlusion on the left side of the mouth.

3129 South Grand Boulevard.

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## Fielding H. Garrison, the Caduceus, and the United States Army Medical Department

[From the Bulletin of the History of Medicine, 13:627 (May) 1943.]

"Astonishingly few physicians are aware of the fact that the proper emblem of medicine is the single-serpent-entwined staff of Aesculapius and not the two-serpent-entwined (and, since about 250 B. C., winged) wand of Hermes or Mercury, which was known to the Greeks as the *kerykeion* and to the Romans as the *caduceus*. Frothingham and Boetzkies have clearly traced the caduceus back to the twin-serpent emblem of the Babylonian messenger-god, Ningishzida, from whom Hermes was derived. The conclusion that the caduceus stands originally and primarily for peaceful message-bearing, or for peaceful or commercial pursuits generally as contrasted to military activities, is of course inescapable. In a previous publication, I presented some previously unrecognized aspects of the history of

the caduceus and of its present-day widespread misuse (by the medical section of the Office of Civilian Defense, for example) as a medical insignia.

"The late Fielding Garrison, in a series of papers published between 1919 and 1932, has somewhat confused the issue by insisting that Hermes and Mercury possessed a sufficient number of medical attributes and functions to justify the use by the United States Army of their emblem, the caduceus, as a medical symbol. . .

"Garrison did not feel that the caduceus was a proper emblem to use for the purpose of distinguishing an organization as medical. His insistence on the medical functions of Mercury and Hermes was justified only by the necessity, as he saw it, of defending the U. S. Army's use of the ca-

duceus against 'officious and idle-minded persons.' And even then he advanced this argument only when pressed 'too hard.'

"Whether the caduceus was originally adopted by the U. S. Army Medical Department as a medical or as a non-combatant emblem, we do not know. The fact that it is now used not only by physicians, nurses, dentists, veterinarians and officers of the Sanitary Corps but also by officers of the Medical Administrative Corps on blankets, dishware, silverware and the like suggests that its present use is indeed not medical but administrative. Moreover, the Coat of Arms, which contains the single-serpent-entwined Aesculapian staff, is now officially attributed not to the entire Medical Department but only to its strictly medical subdivision, the Medical Corps."

# The Anode-Film Distance in Intra-Oral Roentgenography

GEORGE SCHUGAR, B.S., D.D.S., Pittsburgh

## DIGEST

The purpose of this presentation is to show and illustrate an accepted roentgenologic law by which the exposure of slow film with the conventional x-ray machine may be sharply reduced by means of a shorter anode-film distance. Distortion studies as well as results of various anode-film distances are illustrated.

1. The conventional procedure of speed or ultra-speed films and caustic developers encouraged by the use of the 8 inch gap does not lend itself to the best obtainable results with the present 110 volts-10 milliamperes machine.

2. The combined rapidity of the speed films and caustic developers is too difficult for the average dentist to control.

3. In comparison with the 8 inch gap, the proposed procedure of a 7 inch, 6½ inch or even 6 inch gap, does not give marked difference in distortion; however, the shorter anode-film distance makes it possible to utilize slow film with virtually the same exposure as intermediate speed film. The use of slow film in combination with a weaker developing solution, moreover, will afford greater latitude in exposure as well as in development<sup>1</sup> and assure worthwhile results.

4. A weaker developing solution is preferable in dental roentgenography, because it produces moderate contrast, thereby assuring greater differentiation in anatomic detail when the length of development is compatible with the contrast range of the jaw.

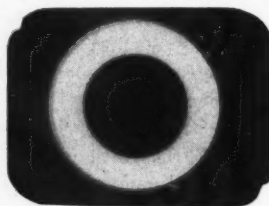


Fig. 1A

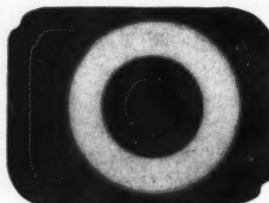


Fig. 1B

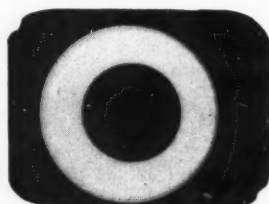


Fig. 1C

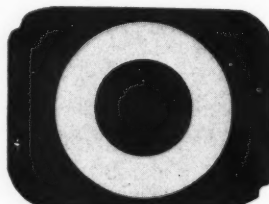


Fig. 1D

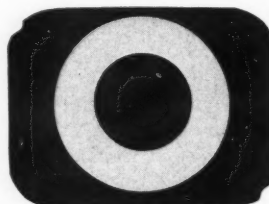


Fig. 1E

Fig. 1—A, 6 inch gap, approximately 27½ mm., total diameter; B, 7 inch gap, approximately 27 + mm., total diameter; C, 8 inch gap, approximately 27 mm., total diameter; D, 10 inch gap, approximately 26½ mm., total diameter; E, 12 inch gap, approximately 26 mm., total diameter.

5. The / stop of a camera shutter controls the volume of light. The anode-film distance is analogous, as it controls the intensity of the rays.

6. The anode-film distance in intra-oral roentgenography is not a fixed relation. This changing factor adds a severe handicap when the narrow range conventional rapid technique is employed.

7. Law: Time is directly proportional to the square of the distance.

Interchangeable cones make it easy to standardize with the finer detail, wider-latitude slow film as well as with a weaker developer. Better roentgenographic composition is likewise had.

## Experiment 1

A roentgenogram was taken of a metal ring which measured 25 mm. in diameter and 14 mm. in height. This was done at varying anode-film distances. The height of 14 mm. is a rough estimate of the average distance between the film and the labial or buccal surfaces of the roots. The results are shown in Fig. 1, A, B, C, D, and E.

In reading roentgenograms even under ideal conditions, magnified distortion should be considered. On the basis of the first experiment, the average percentage of magnified distortion on periapical films at various anode-film distances is as follows:

6 inch anode-film distance,	10 per cent
7 inch anode-film distance,	9 per cent
8 inch anode-film distance,	8 per cent
10 inch anode-film distance,	6 per cent
12 inch anode-film distance,	4 per cent

Magnified distortion was evident on all anode-film distances. The 12 inch gap presents the best type of image. This anode-film distance, however, is not practical with the conventional machine as an average 6 second exposure would necessitate 13½ seconds to acquire the same density or opaqueness. The difference between 8 inch and 6 inch gaps is

<sup>1</sup>Schugar, George: The Proper Approach to Roentgenography, DENTAL DIGEST, 48:111, 112 (March) 1942.





Fig. 2A

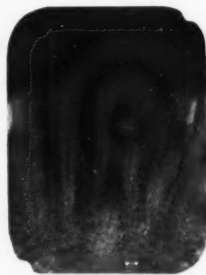


Fig. 2B



Fig. 2C



Fig. 2D



Fig. 2E

Fig. 2—A, 6 inch anode-film distance; exposure  $2\frac{3}{4}$  seconds; B, 7 inch anode-film distance; exposure  $3\frac{3}{4}$  seconds; C, 8 inch anode-film distance; exposure 5 seconds; D, 10 inch anode-film distance; exposure  $7\frac{1}{4}$  seconds; E, 12 inch anode-film distance; exposure  $11\frac{1}{4}$  seconds.



Fig. 3A



Fig. 3B

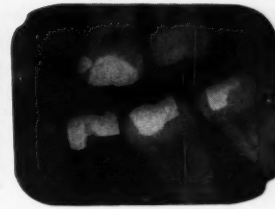


Fig. 3C

Fig. 3—A, 6 inch anode-film; exposure  $4\frac{1}{2}$  seconds; B, 7 inch anode-film; exposure  $6\frac{1}{4}$  seconds; C, 8 inch anode-film; exposure 8 seconds.



Figs. 4 and 5—Cones,  $6\frac{1}{2}$  inch and 7 inch, which greatly improve the versatility and efficiency of the present type of machine. These cones are made of plastic and are permanently attached to the screw base by means of DuPont's clear household glue.

slight; however, in the small size tooth the difference in distortion would be for practical purposes negligible.

### Experiment 2

A roentgenogram was taken of the lower anterior area with slow film at varying film-anode distances. The exposures were increased to compensate for the increased anode-film distance. The developing time in each case was 10 minutes, in pyrometol. The results are shown in Fig. 2, A, B, C, D, and E.

All roentgenograms show approximately the same density or opacity; thus, time is directly proportional to the square of the distance. The roentgenograms seen in Fig. 2 show the vital importance of considering the anode-film distance in all exposures. All these roentgenograms show detail and are of diagnostic value.

### Experiment 3

Bite-wing roentgenograms on slow films of the same area were made at various anode-film distances. The results are seen in Fig. 3. All roentgeno-

$$\text{Time}^1 : \text{Time}^2 = \text{Distance}^1^2 : \text{Distance}^2^2$$

*Example:* Find exposure for a 7 inch gap if the exposure is 8 seconds for an 8 inch gap.

$$\begin{aligned} 8 \text{ seconds} : x &= 64 : 49 \\ 64 x &= 392 \\ x &= 6\frac{1}{4} \text{ seconds} \end{aligned}$$

#### CONVERSION SCALE

8 inch gap	7 inch gap	6½ inch gap	6 inch gap
8 seconds	6½ seconds	5¼ seconds	4½ seconds
7 seconds	5½ seconds	4½ seconds	4 seconds
6 seconds	4½ seconds	4 seconds	3½ seconds
5 seconds	3¾ seconds	3¼ seconds	2¾ seconds
4 seconds	3 seconds	2¾ seconds	2¼ seconds

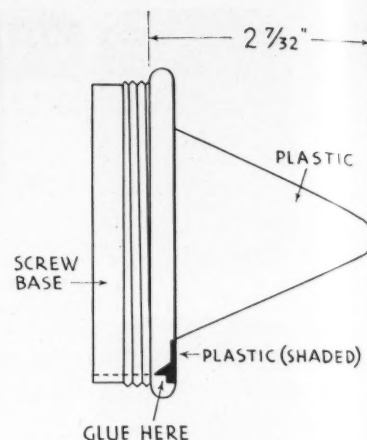


Fig. 6—Diagram of 7 inch cone which is used for shorter exposures, to prevent interference on steep angulations; better transverse alignment of tube, better angulations, and more critical control of central ray are had.

grams seen in Fig. 3 show apparently the same end-results.

A 6 inch cone may be utilized with slow-speed film to an excellent advantage for bite-wing roentgenograms for children.

3400 Fifth Avenue.

## Periodontitis in Early Diagnosis of Diabetes

[From Current Medical Literature, J.A.M.A. 122:1048 (August 7) 1943.]

"Grott surveyed 350 patients with diabetes for the presence of parodontitis. Particular attention was paid to looseness of teeth and to the length of time these symptoms existed before the discovery of the diabetes. It was found that 148 of the patients had loose teeth; 34 others had symptoms of

parodontitis without looseness of teeth. Of a total of 350 patients, 182 (52 per cent) had had changes in the parodontium before diabetes was recognized. In 80 of the 148 patients the symptoms of parodontitis antedated the discovery of diabetes by from one to five years, and in 68 by five years.

These figures indicate that the symptoms of parodontitis can be of value in the early diagnosis of diabetes. If no sugar is detected in the urine in the presence of a parodontitis a tolerance test should be made and the blood sugar curve investigated."

## Announcement of American Publication of British Oral Surgery Book

THE DENTAL TREATMENT OF MAXILLO-FACIAL INJURIES by W. Kelsey Fry, P. Raw Shepherd, Alan C. McLeod and Gilbert J. Parfitt is now available in the United States and may be purchased from the J. B. Lippincott Company, Philadelphia.

The opening sentence of The Editor's Page of December, 1942 read: "To learn more and to learn best, it is generally advisable to consult people with the widest experience. The British have such an experience in the treatment of maxillo-facial injuries in-

curred during the present war. Recently four British dentists published a book which should be the model for other war manuals." THE DENTAL TREATMENT OF MAXILLO-FACIAL INJURIES was the book of reference.

# Prosthetic Measurement\*

LIEUTENANT JEROME J. PAVLIGER, Dental Corps, A. U. S., Fort Ord, California

## DIGEST

The proportions of a well-balanced face have been set by an esthetic standard. In actual life these proportions are rarely seen. An understanding of these relations, however, enables the prosthodontist to overcome obstacles in esthetics. A helpful prosthetic measuring device is suggested and illustrated.

THE PROPORTIONS of a well-balanced face according to esthetic standards will be more readily attained by the adaptable prosthetic measuring device illustrated in Fig. 1. The distance from the root of the nose, B, to the junction of the upper lip with the septum of the nose, C, should be equal to the distance from this point to the chin, E. The distance from C to D should be equal also to the distance from D to E. The length of the head from A to E should be approximately one eighth of the whole length of the body in adults, and one fifth of the length in children.

## Records

Records can be made of patients long before prosthodontia is contemplated. When teeth must be removed the patient's problem is facilitated by such records. The amount of bite opening is recorded before extracting

the teeth. This can then be compared with the prosthesis in position. Absorption of ridges and the consequent loss of vertical dimension in denture cases may be computed. The resulting loss of biting power is recognized, and a loss of hearing is sometimes detected.

## Construction and Function of Instrument

The facial recorder is easily constructed from two steel knitting needles. One needle is cut in half. With soft solder, tubing is soldered at right angles, and the knitting needles are slipped through the tubes as illustrated.

1. The instrument shown in Figs. 1

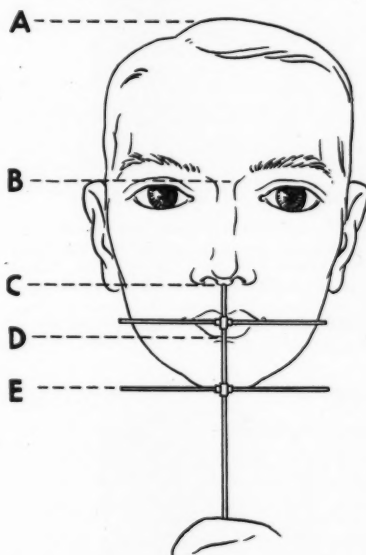


Fig. 1—Measuring device marking the median line. Distance from root of nose, B, to junction of upper lip with septum of nose, C, should be equal to distance from this point to chin, E. Distance from C to D should be equal to distance from D to E. A to E represents length of head.

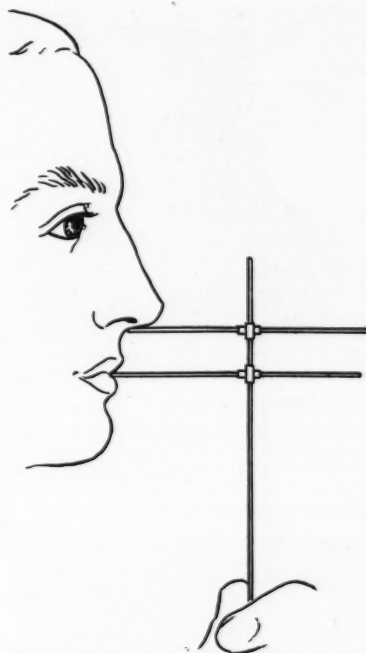


Fig. 2—Side view of measuring device in position.

and 2 enables the dentist to mark a straight and vertical median line by holding one end of the long rod beneath the chin and centered to the face.

2. In the same position the cross-bars are used as a guide plane to set the bite and the teeth in their horizontal relation to the face. Various pre-extraction records are made by changing the positions of the arms in the movable tubing.

3. The labial position of the anterior teeth can be recorded as well as the labial position of the lip line.

4. A ruler is used to measure the distances on the instrument for the purpose of keeping records.

Station Hospital.

## If Your DENTAL DIGEST Is Late

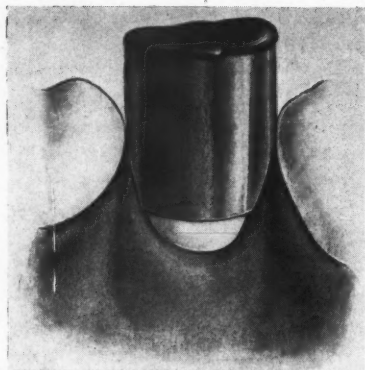
IN WARTIME, magazine mail is delayed because the postal service is overburdened. We mail THE DENTAL DIGEST each month on its scheduled mailing date—the fifteenth of the month of issue. But it is impossible to control the date of delivery to readers. Please be patient if your DENTAL DIGEST is late.

\*This article was received for publication on May 4, 1943, while Doctor Pavliger was still in civilian practice.



# Acrylic Inlays

G. RIDGLEY PARKER, D.D.S., Ventura, California



## Technique

Fig. 1—The cavity preparation is made as for a gold inlay. As much bulk as possible is established. A compound impression is taken in a copper band as in an indirect technique (Fig. 1).

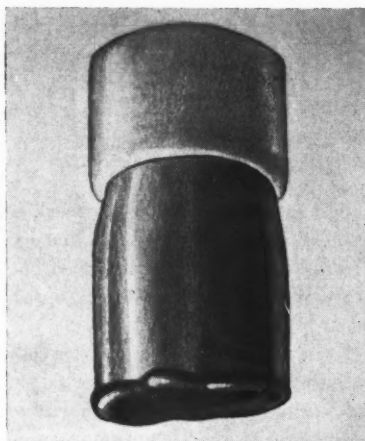


Fig. 2—Pack the impression with kryptex or a similar material (Fig. 2).

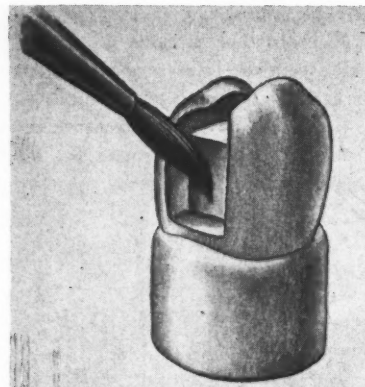


Fig. 3—Separate the die and paint with a separating medium which comes in the acrylic packet (Fig. 3).

## DIGEST

A short-cut technique for acrylic inlays is suggested in which casting is done directly to the die.

## Advantages:

1. The time-saving factor in this technique is considerable in that the wax pattern, flasking, and setting time of stone are all eliminated.
2. A surprisingly accurate inlay



Fig. 4—Adapt the copper band to the die, cutting the top off at the level of the highest point of the cavity preparation. Twist a stout orthodontic wire around the base of the band just below the gingival floor to hold the band firmly against the die at this point (Fig. 4).



Fig. 5—Stretch the copper band at the contact point with a burnisher or with contouring pliers, slightly beyond normal contact, to allow for excess acrylic in this area. The contact point must be ground in the mouth and no further addition may be made (Fig. 5).



Fig. 6—Mix acrylic to the proper consistency and pack carefully into the die with sufficient excess on top of the preparation to allow for compression (Fig. 6). A large, stainless steel gingival margin trimmer is adapted as a packing instrument by cutting off the blade at the angle and slightly rounding the end, so that the taper runs toward the end rather than toward the shank. The instrument has a wedging effect on the acrylic, which therefore does not pull back with the instrument.

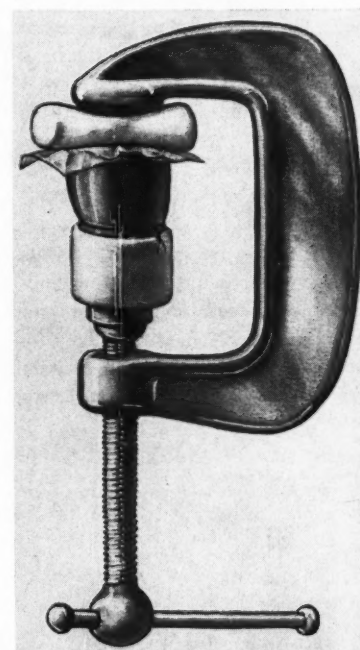


Fig. 7—Cover acrylic with wet cellophane and a small piece of cotton roll. Place in a "C" clamp. Compress firmly and process in hot water according to acrylic directions.

Fig. 8—When the acrylic material has cooled sufficiently, remove the band and trim the margins on the die. Carve occlusion and contact in the mouth with burs and stones. The inlay may be placed on the die for a final polish if desired.

may be secured by processing directly on an accurately prepared die, thus eliminating the possibility of distortion of a wax pattern.

3. This technique is extremely simple in occlusal inlays. It is equally applicable to two-surfaced or three-surfaced inlays on bicuspid and molars, if care is taken in contouring the copper band at the contact point to allow sufficient material in this area for final carving in the mouth.

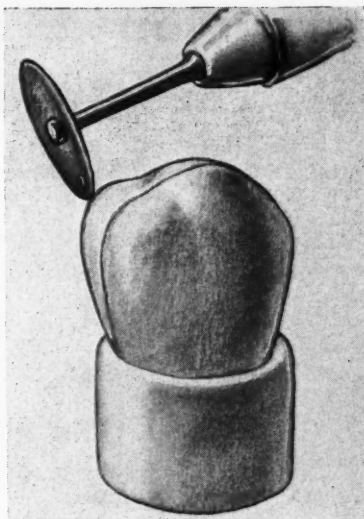


Fig. 8

## Chicago Dental Society Announces Its Third Annual Prize Essay Competition

Winner to Receive Cash Award of \$500.00 and Expenses to Present Essay at 1944 Midwinter Meeting

As its contribution to the encouragement of research and investigation in dentistry, the Chicago Dental Society announces a nation-wide competition for the best essay containing new and significant material of value to dentistry. One cash prize of \$500.00 is offered.

The recipient will be invited to present his essay at the 1944 Midwinter Meeting to be held at the Palmer House, February 21-24. The expense of attendance will be borne by the Chicago Dental Society and will be in addition to the cash prize of \$500.00.

### Contest Rules

**Eligibility to Apply for Participation**—Any American Dental Association member or other person of scientific attainment affiliated with a recognized institution in the dental field shall be eligible to apply for permission to enter the competition, provided written application is filed be-

fore October 15. The Chicago Dental Society through its duly appointed committee shall pass on the qualifications of applicants. Application forms may be secured upon written request to the Chicago Dental Society, 30 North Michigan Avenue, Chicago, 2, Illinois.

**Character of Essays**—Each essay submitted must represent an original investigation and contain some new significant material of value to dentistry. Proposed subject matter first must be submitted in synopsis form containing (1) the known published evidence and (2) the essayist's new conclusions with supporting evidence. Provision for this is made in the application form which must be submitted to the Chicago Dental Society for approval.

**Prize**—A cash prize of \$500.00 is offered for the essay judged to be the winner. The Award Committee, however, reserves the right to omit the

award if in its judgment none of the entries is worthy. Honorable mention will be awarded all authors whose essays are given final consideration by the Award Committee.

### Presentation of Winning Essay

The author of the winning essay will be invited to present it at the opening general session of the 1944 Midwinter Meeting, it being understood that, irrespective of the number of co-authors or collaborators, only one shall be invited. The expense of the winner will be paid by the Chicago Dental Society on the same basis as regularly invited essayists; that is, round trip railroad fare and pullman accommodations to Chicago, plus an allowance sufficient to cover out-of-pocket expense, such as hotel room and meals for the day that the essay is presented.

### Publication

**Ownership and Publication**—The winning essay is to become the property of the Chicago Dental Society and will be published in the most advantageous manner. All other essays will be returned to their respective authors.

**Mechanical Specifications**—Good form must be followed in the writing of essays. They must be typewritten on a good quality 8½ by 11 white paper, double-spaced with 1 inch margins. Even though colored films may be used for presentation purposes, black and white prints should accompany the essay. It is suggested that essays be from 15 to 25 pages in length, exclusive of bibliography, illustrations, tables and charts.

The name and address of the author must not appear on the essay. It should be typed on a separate sheet of paper and clipped to the essay in order to keep the author's identity from becoming known to the Award Committee.

Three copies of each paper must be submitted as this number is essential for judging purposes.

**Final Submission Date:** No essay will be considered for this competition unless received in triplicate at the office of the Chicago Dental Society not later than November 15, 1943.

# Prosthetic Restoration of an Eye and Contiguous Tissue

E. LESTER JONES, JR., A.B., M.A., D.D.S., Albany, New York

## DIGEST

A fairly simple method is presented of restoring a portion of the facial anatomy which was lost through surgery.

### Report of a Case

*History*—The patient, aged 55, had a carcinoma of the outer surfaces of the left orbital region involving both upper and lower eyelids as well as a portion of the upper face and side of the nose, contiguous thereto (Fig. 1).

The patient had been subjected to considerable radium and roentgen therapy without any satisfactory result. It was decided to do an enucleation of the eye and extensive orbital and facial surgery. The result, so far as the carcinoma was concerned, was excellent, but the loss of facial tissue left the patient considerably disfigured (Fig. 2).

*Problem*—The problem was to restore the tissue lost through surgery, by the use of a prosthetic appliance, in order that the patient might continue his gainful occupation, and maintain his position in society.

*Treatment*—The extensive surgery had left an opening into the ethmoid cells and the maxillary sinus (Fig. 2).

1. Softened modeling compound was fitted into these areas and allowed to harden.

2. The outer surfaces were scored in order that they might later be fitted into the impression in their proper position. The compound cores, or impressions, were returned to place.

3. The eyebrows were then heavily coated with vaseline, and a plaster of Paris impression of the face was taken. I preferred plaster to all other materials because of the ease of manipulation and positiveness of the results. The plaster was then removed from the face, and the compound cores, from the orbital cavity. The

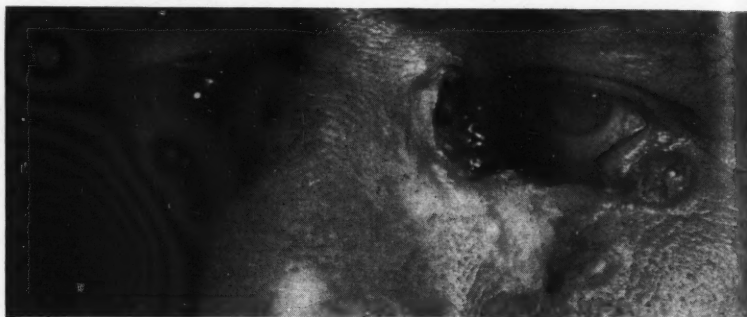


Fig. 1—Appearance of carcinomatous tissue.

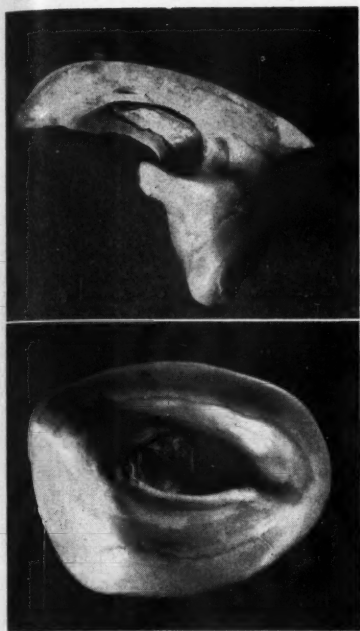


Fig. 2—Loss of tissue following surgery, showing opening into ethmoid cells and into maxillary sinus.

Fig. 3—Model of face cast in stone from plaster impression.







Figs. 4 and 5—Appliance after curing; de-flasked, sanded and polished.

cores were fitted into the impression.

4. The impression was poured with artificial stone and a model or cast (Fig. 3) was obtained. The case was studied for retention and the exterior area to be included in an appliance was outlined with pencil.

5. Pure bee's wax was forced into the orbital cavity, with the wax entering the retentive areas of the ethmoid and maxillary sinuses. These areas were previously determined by a study of the model. The exterior surface of the wax was molded, contoured and carved to the exact outline that the finished case was to assume. The wax model was removed.

6. An artificial eye of the exact size, color and shape of the natural eye was selected by Arthur Holding, M.D., who performed the surgery. The wax model was carved from its posterior aspect, so that the eye might be fitted into the wax pattern from a posterior direction. The patient was called in at this point to aid the operator in placing the eye in its exact position in the mold.

7. The glass eye was removed from the wax, and the case flaked in the manner of an ordinary vulcanite



Fig. 6—Appliance fitted into stone model.

case; packed; closed, and vulcanized. The only difference is in the use of white rubber instead of the other various types of vulcanite.

8. After curing, the case was de-flasked, sanded and polished (Figs. 4 and 5).



Figs. 7 and 8—End-result.

9. The appliance was fitted to the stone model (Fig. 6).

10. The patient was called in and the vulcanite appliance tried with the artificial eye in position.

11. When the contour, retention, and esthetic aspect of the restoration were considered satisfactory, the appliance was painted with artist's oil paints. This is the most difficult part of the whole procedure unless one is familiar with the use of oils, because the esthetic result of the case depends on the harmonizing of the color of the appliance with the remainder of the face with regard to skin texture and color. The end-result of this case is shown in Figs. 7 and 8.

*Comment*—The patient has worn this appliance for eleven years. He has had no recurrence of the lesion, and is still fulfilling his position, which necessitates his meeting the public.

75 State Street.

# Focal Infection and Idiopathic Epilepsy

OTTO MEYER, M.D., New York City

## DIGEST

**Focal infection with primary foci in the oral cavity and secondary foci in the jugular veins causes idiopathic epilepsy.**

The diminution in the lumen of the jugular veins interferes with the total venous drainage from the brain. The resulting venous congestion and intracranial pressure irritate the convulsion center and produce epilepsy. Bacterial toxins produced in the primary or secondary foci are also able to irritate the convulsion center. The predisposition to idiopathic epilepsy seems to be inherited.

## Oral Foci as Etiology of Epilepsy

THE RELATIONSHIP between epilepsy and defective teeth was stressed in 1818 by Benjamin Rush, one of the signers of the Declaration of Independence and one of America's most noted physicians, in his paper on: "Medical Inquiries and Observations."

Ryan and Bowers<sup>1</sup> report the case of an epileptic patient who was completely cured after extraction of three pulpless teeth. This report indicates that epilepsy is the result of a focal infection.

Many epileptic patients have not been benefited by the removal of oral foci. The explanation may lie in the fact that a secondary focus had formed in the jugular veins, which was not removed. I was able to cure several cases of idiopathic epilepsy, some of long standing, completely and without recurrence or epileptic seizures, when I

supplemented the removal of the primary foci in the oral cavity with the elimination of the secondary foci in the wall of the jugular veins.

## Mechanism of Spread of Infection

It cannot be emphasized enough that all bacteria, except the coli bacillus, have a phlebotropic tendency. The affinity of the microbes for the veins is the deciding factor in the spreading mechanism<sup>2</sup> of dentogenic and tonsillogenic infections.

Inflammation of the jugular veins causes a swelling of the inner lining. The result is a narrowing of the jugular veins. As the jugular veins constitute virtually the only venous connection between the head and the heart the drainage of the venous blood from the region of the head becomes incomplete. The result is a congestion of the whole head area, including the brain.

## Other Causative Factors in Convulsions

**Circulatory Disturbances**—Many authors have suggested circulatory disturbances as the cause of idiopathic epilepsy. In a chapter on experimentally produced convulsions Elsberg<sup>3</sup> says: "There is much to support the belief that in the final analysis, convulsive seizures in man, of cerebral origin, are secondary to an interference with the normal blood supply to the epileptogenous areas—no matter where they are located."

**Irritations**—It is a long known fact that irritation of two areas in the brain may cause convulsions. One area is situated in the cortex of the brain, whereas the other area is in the medulla oblongata of the brain. Modern medical research has persistently disregarded the convulsion center in the medulla oblongata of the brain. Since

it became known that intensive irritation of the motoric cortical regions of the brain may produce epileptiform convulsions the medullary theory of epilepsy seems to have been abandoned in favor of the cortical theory.

The convulsion center is, like all other nerve centers, a group of nerve cells concerned with a special function. The convulsion center presides over the act of convulsion just as the breathing center controls the mechanism of breathing. Irritation of the convulsion center produces convulsions. Several ways have been described to irritate the convulsion center in the medulla oblongata. Circulatory disturbances, chemical irritation, toxic irritation, and mechanical irritations are able to cause convulsion.

The normal function of all nerve centers depends on a normal blood circulation. Physiologists have known for a long time that sudden venosity of the blood can irritate the convulsion center. Landois<sup>4</sup> in 1867, and Hermann and Escher<sup>5</sup> in 1870, produced convulsions experimentally by ligation of the jugular veins and proved that venous congestion of the brain can produce convulsions.

**Rôle of Carbon Dioxide**—Modern research confirms the rôle of carbon dioxide in idiopathic epilepsy.

E. L. Gibbs, W. G. Lennox and F. A. Gibbs<sup>6</sup> in their paper on "Variations in Carbon Dioxide Content of Blood in Epilepsy" come to this conclusion: "All the available evidence indicates that carbon dioxide plays a significant part in the causation of epilepsy." They also report that carbon dioxide has a pronounced influence on cortical rhythms in electro-encephalographic examinations. Because the hydrogen-ion concentration of the blood depends on the amount of carbon dioxide, it seems plausible that changes in the

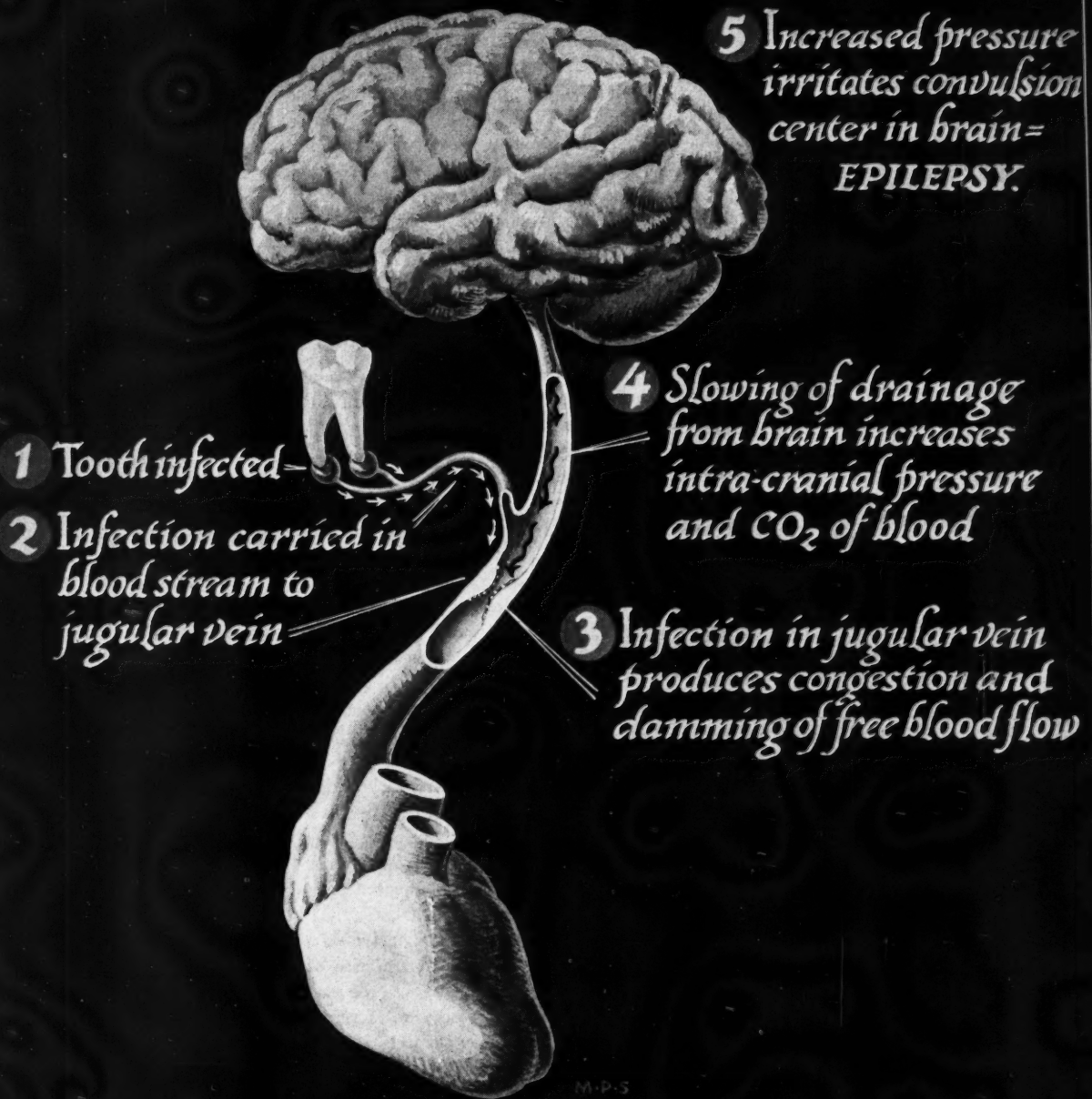
<sup>2</sup>Meyer, Otto: The Mechanism of Oral Focal Infection, DENTAL DIGEST, 46:208 (June) 1940.

<sup>3</sup>The Intracranial Pressure in Health and Disease: Research Publications of the Association for Research in Nervous and Mental Disease, Baltimore, Williams & Wilkins Company, Volume 8, 1929.

<sup>1</sup>Ryan, T. I. J. and Bowers, E. F.: Teeth and Health, New York, G. P. Putnam's Sons, 1921.

<sup>4</sup>Cited by Landois, L.: Lehrbuch der Physiologie des Menschen, Urban und Schwarzenberg, edition 15, 1919.

<sup>6</sup>Gibbs, E. L.; Lennox W. G., and Gibbs, F. A.: Variations in Carbon Dioxide Content of Blood in Epilepsy, Arch. Neurol. & Psychiat. 43:223 (February) 1940.



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DIGEST



amount of carbon dioxide in the blood of the brain influence electric recordings.

**Mechanical Irritation** — Intensive mechanical irritation (e.g. sudden crushing) of the medulla oblongata can cause convulsions.

### Intracranial Pressure

**Venous Congestion of Brain**—From a clinical point of view venous congestion of the brain seems to be the most important factor in epilepsy. Venous congestion produces not only an excessive amount of carbon dioxide but it increases the intracranial pressure.

Hubert S. Howe<sup>3</sup> says in his paper on physiologic mechanism for the maintenance of intracranial pressure: "Experimental compression of the jugular veins inhibits the escape of blood from the skull and the increased volume of blood in the dural cavity resulting from this procedure causes a rise in the intracranial pressure." He further states: "The intracranial pressure is roughly equal to the venous pressure and within limits variation in the pressure in either the cerebrospinal fluid or the venous blood is accompanied by similar directional pressure changes in the other fluid."

Lewis H. Weed<sup>3</sup> in his paper on experimental studies of intracranial pressure comes to the conclusion: "Variations in pressure in the cerebral veins effect changes in the cerebral fluid."

Frank Fremont-Smith, and L. S. Lubie<sup>3</sup> state in their paper on vascular hydrostatic and osmotic pressures: "The effect of raising the intracranial venous pressure is well known both experimentally i.e., in tying the jugular veins, and clinically, in sinus thrombosis."

**Jugular Compression** — There is enough experimental evidence to show that the patency of the jugular vein is an important factor for the normal function of the brain. Any diminution of the jugular veins by compression from the outside or by inflammatory swelling of the inner wall of the jugular vein has the same effect on the intracranial pressure.

Conrad Berens,<sup>3</sup> the noted New York ophthalmologist, says in his paper on the fundus changes and the blood pres-

sure in the retinal arteries in increased intracranial pressure: "The first change usually discovered in the blood vessels is slight fullness of the veins, suggesting interference with the return circulation. A keen observer may then note increased tortuosity." He says further: "Jugular compression caused a marked increase in the cerebrospinal fluid pressure."

In experiments on dogs Rosemann<sup>4</sup> has shown that increased pressure within the skull can produce loss of consciousness and convulsions.

**Mental Excitement and Alcohol**—It is interesting that individual attacks may be precipitated by mental excitement and the use of alcohol. In both conditions there is a sudden inflow of arterial blood. When the jugular veins are not completely patent, there is interference with the outflow of the blood. A sudden congestion in the brain area is the result.

**Nocturnal Breathing**—Many epileptic patients suffer from attacks during the night. L. Stevenson, B. F. Christenson, and S. B. Wortis<sup>3</sup> made experiments on intracranial pressure in man during sleep and found that the intracranial pressure is increased during sleep. L. Stevenson states that deep breathing (over-ventilation) decreases the pressure within the head. Inasmuch as the return of the venous blood is intimately connected with breathing (intrathoracic suction), it becomes plausible that superficial breathing during sleep may be responsible for venous congestion and increased pressure in the brain area. Walter M. Kraus<sup>3</sup> in a paper on convulsive seizures resulting from a general rise of intracranial pressure comes to the conclusion that increased intracranial pressure during sleep suggests a possible causal relation between increased intracranial pressure and nocturnal convulsions (epilepsy).

**Pressure of Spinal Fluid**—In epileptic attacks K. Eskuchen<sup>6</sup> and A. Levinson<sup>7</sup> observed an increase in the pressure of the cerebrospinal fluid. The Queckenstedt phenomenon shows that the pressure of the spinal fluid can be increased by compressing the jugular

veins. Consequently, the observations of Eskuchen and Levinson suggest that during the epileptic attacks an increased venous congestion exists.

**Primary and Secondary Factors**—Kraus<sup>3</sup> believes that increased intracranial pressure alone does not produce convulsions. He believes that two things are necessary to precipitate convulsions, the primary disorder and the superimposed increase of intracranial pressure.

**Heredity**—It is generally believed that hereditary predisposition is important in idiopathic epilepsy. This factor may be responsible for the lowered resistance of the convulsion center.

**Toxic Origin**—Landois<sup>4</sup> in 1887 experimentally produced convulsions with direct irritation of the convulsion center by chemical substances (potassium and sodium salts). It is logical to assume that bacterial toxins produced in infected jugular veins may have a selective affinity for the convulsion center and are apt to irritate the convulsion center by distant action.

**Infection**—The importance of infection has been stressed by several French authors. J. Decourt<sup>8</sup> wrote a paper on the probable rôle of rheumatic infection and chorea in certain epilepsies.

Epilepsy has been often described as the consequence of rheumatic chorea.

W. L. Bruetsch,<sup>9</sup> Director of the Research Department of the Central State Hospital in Indianapolis, who was awarded a prize from the American League against Epilepsy for his research in epilepsy, has demonstrated in autopsies obliterating rheumatic arteritis in the cerebral blood vessels with secondary changes in the cortex. He has introduced the term "rheumatic epilepsy." The lesions in the arteries seem to be caused by bacterial toxins. Some authors hold that inflammation of the arteries is due to a localized antigen-antibody reaction in the wall of the arteries of a sensitized body. I have outlined<sup>10</sup> the importance of

<sup>3</sup>Decourt, J.: A propos de l'épilepsie cardiaque, Bull. mem. Sec. med. d. hôp. de Paris, 48:1470 (November 28) 1932.

<sup>9</sup>Bruetsch, W. L.: Rheumatic Epilepsy, Am. J. Psychiat. 98, March, 1942.

<sup>10</sup>Meyer, Otto: Latent Phlebitis as a Cause of Rheumatism, London, Rheumatism J., January, 1939.

<sup>6</sup>Eskuchen, K.: Ztschr. f. d. ges. Neurolog. und Psychiat. 24:486, 1914.

<sup>7</sup>Levinson, A.: The Cerebrospinal Fluid in Health and Disease, 1923.

latent infection in the jugular veins as the chief center of the morbid process in acute rheumatic fever and chorea.

My own experience has convinced me that latent focal infections in the jugular veins are responsible for idiopathic epilepsy.

### Treatment

The logical treatment, therefore, must be the removal of primary oral foci and secondary foci in the jugular veins. This will result in the normalization of the jugular lumen and decongestion of the brain area.

### Comments

Some authors believe that 80 per cent of all epileptic cases are idiopathic; whereas the other cases are

symptomatic, resulting from definitely known causes, such as brain tumor, skull fractures, and other injuries of the brain.

Lennox<sup>11</sup> estimates that about 500,000 persons in the United States are subject to epileptic seizures. This is approximately the same number as the persons who have diabetes.

At present the problem of epilepsy is more discussed than ever. Many soldiers who are subject to seizures are dismissed by the Army and look for help. I was successful in curing several of these dismissed soldiers. It was gratifying to see these depressed men regain confidence in themselves.

Inasmuch as dentogenic infections

<sup>11</sup>Lennox, W. G.: *Science and Seizures*, New York, Harper & Bros., 1941.

are important in the etiology of epilepsy, it is evident that the dental and medical profession should understand clearly the relationship between focal infection and epilepsy. The close and harmonious cooperation between the dentist and the physician is of utmost importance for the benefit of epileptic patients. I hope that the dental and the medical profession will consider the important rôle of focal infection in idiopathic epilepsy and help epileptic patients to become useful members of society.

My conception of epilepsy as a symptom of focal infection may sound simple, but it has the advantage of being based on experience.

200 West Fifty-Fourth Street.

## Ludwig's Angina

[From Current Comment, Journal of the American Medical Association, 122:678 (July 3), 1943.]

"Williams and Guralnick<sup>1</sup> advocate in the treatment of Ludwig's angina early radical surgical intervention, use of sulfonamide compounds, zinc peroxide dressings in the presence of anaerobes and preliminary exposure of the trachea in every case prior to operation, or tracheotomy in the presence of respiratory embarrassment. Intravenous pentothal sodium is recommended as the most satisfactory anesthetic. The mortality in a recent group of 20 cases treated by this method at the Boston City Hospital amounted to only 10 per cent, whereas the mortality in Williams and Guralnick's previous series of 31 cases was 54 per cent. In both groups a dental lesion constituted

the predominant etiologic factor—the initiating lesion in 18 (90 per cent) of the latter series. Dental extractions immediately preceded the onset of symptoms in 12. The act of extraction is not so important from the standpoint of etiology as is the preexisting septic tooth or mouth from which the subsequent spread of infection arises. Bacteriologic studies in these 20 cases revealed the presence of streptococci in all and the presence of Vincent's organisms in 50 per cent. Examination was not made for the presence of the microaerophilic streptococcus described by Meleney. Because of the presence of streptococci in all cases, the authors felt that sulfonamides were indicated throughout the disease. However, in their experience chemotherapy alone could not be relied on in these syner-

gistic infections and was regarded by them as secondary to the early radical incision of the area. The sulfonamides were used both generally and locally. In some cases they placed 5 to 8 Gm. of sulfanilamide crystals in the depth of the wound and loosely packed it with iodoform gauze. Meleney's method<sup>2</sup> of treating foul mouth and neck infections with zinc peroxide was found to be most effective in the presence of Vincent's organisms. In such cases dressings saturated with zinc peroxide frequently yielded a clean, odorless wound in a very short time. The prophylactic use of zinc peroxide powder for several days prior to extraction would undoubtedly reduce the number of cases of this formidable infection."

<sup>1</sup>Williams, A. C., and Guralnick, W. C.: The Diagnosis and Treatment of Ludwig's Angina: A Report of Twenty Cases, *New England J. Med.* 228:443 (April 8) 1943.

<sup>2</sup>Meleney, F. L.: The Prophylactic and Active Use of Zinc Peroxide in Foul Smelling Mouth and Neck Infections, *Ann. Surg.* 107:32 (Jan.) 1938.

## The Editor's Page

TWO ENTERPRISING magazines, *Printers' Ink* and *Life*, have recently given attention to postwar economics. *Printers' Ink* surveyed the field of industrial workers by a series of interviews, and came away with a group of convictions. In general the workers interviewed believed that after the war: (1) their earnings will be decreased about 25 per cent; (2) taxes, foods, and other items will be as high in price or higher; (3) the demands for goods will be enormous. Demand preferences were expressed in this sequence: an automobile, an electric refrigerator, an electric washer, a radio.

The *Printers' Ink* survey also pointed out several inconsistencies:

1. Though many expect that their wages will be lower, prices as high or higher, and taxes heavier than now, most of the workers have ambitious plans to own an automobile, a house, and major household appliances.

2. Though many expect that there will be a great deal of unemployment, most workers think that they will continue to work.

3. Though many expect that few women will continue to be employed in plants, a large number of husbands expect their wives to work.

The *Life* article was concerned with jobs for veterans—not doles for them. Wisely this article emphasized that the opportunity to work, to create a home and a way of life were more important for our veterans than bonuses or pensions or doles. *Life* admonishes: "We must begin to think about this job realistically and talk about it even now in the midst of war. We must know how to provide inducements for the brains and the capital, the energy and the ingenuity to open up the biggest vista we have ever had. Oh sure—let's protect the boys (and everyone else) against starvation. But let's not stop there. Let's make an America that will give them something to work for bigger than themselves."

Dentistry needs its best brains, likewise, for this job of postwar planning. The Council on Dental Health of the American Dental Association holds high promise in this field. The problems that are

confronting dental societies include the re-location and the re-equipment of dentists returned from military duty. Many of these men have made such sacrifices while in service that their financial reserves have been depleted. Some of them may need re-location loans from the treasury of the American Dental Association. Among those returning will be disabled dentists. They will need help all through their remaining years—not the help that comes from giving them a dole or a pension, but the help that comes from giving them work that will guarantee their self-respect. Unquestionably many of these dentists could be properly used in public health activities.

All the future concerns will not be for the dentist himself. We should also concern ourselves with the attitudes of the buying public. Many who now have the money to buy dental care will pass out of the dental market as soon as their earnings are reduced. Many of these people will want dental care in the future. It should be provided to them under loan plans wherein they might borrow money from a governmental agency to pay for their care. It would seem preferable that loan methods to pay for medical and dental care be instituted rather than out-and-out gratuities that destroy individual responsibility.

In this postwar world we may expect a resurgence of individualism. Many of the eleven million people in service will have had their fill of regimentation and will not want any more of it for themselves or their families. This should mean a reaffirmation of the capitalistic economy, with this difference: that capitalism of the future must have a bright social consciousness.

One of the chief problems in postwar economics has to do with psychologic patterns. If people are fearful that the postwar world will be one of panics and starvation and depressions, they will be fearful to produce and fearful to buy. This is the time for us to begin to talk about the bright future of production and demand after the war—not to make black and foreboding forecasts.





## *This one's going to hurt!*

Invasion comes high—in blood and money.

Part of the cost must be paid with human life. That means deep and lasting hurt for many and many an American family.

Part of the cost must be paid in cash . . . this September. And *that's* going to hurt, too!

### *The 3<sup>rd</sup> War Loan Drive is here!*

To pay for invasion—to get the money to keep our fighting machine going—you, and every man or woman in America, are asked to invest in at least one extra \$100 Bond in September.

**\$100 EXTRA**, mind you—for *everybody*!

No man or woman can hold back. No man or woman can point to his Payroll buying and say, "They don't mean me!" No man or woman can say, "I'm already lending 10% or 12% or 20%—I'm doing enough!"

Sure—it's going to hurt. It's going to take more than spare cash this time—more than just money that might have gone for fun. It's going to take money you have tucked away. It's going to take part of the money we've been living on—money that might have meant extra shoes or clothes or food! Money that might have gone for *anything* that we can get along without!

Sure—it'll be tough to dig up that extra money. But we've got to do it—and *we will*.

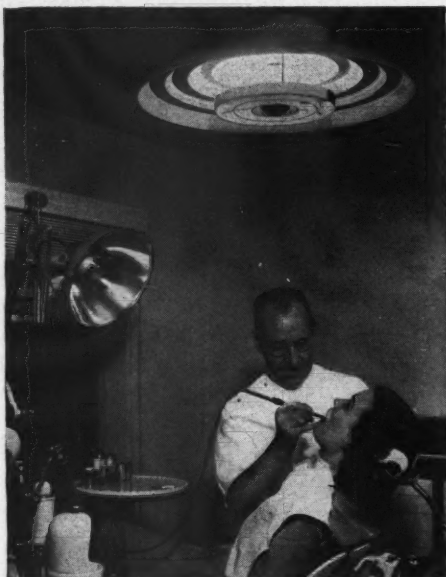
We'll do it partly because of the look that would come over the faces of our fighting men if we should fail. We'll do it partly because the cheapest, easiest way out of this whole rotten business is for everybody to chip in all he can and help end it quick. We'll do it partly because there's no finer, *safer* investment in the world today than a U. S. War Bond.

But mostly, we'll do it because America is right smack in the middle of the biggest, deadliest, dirtiest war in history.

And we're Americans.

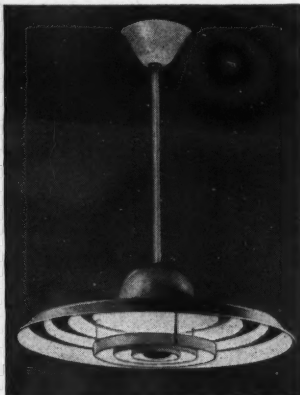
## *Back the attack with War Bonds*

This space contributed to the Third War Loan Campaign by  
THE DENTAL DIGEST



← "G-V": Standard Flush Type  
for ceiling under 10 feet high

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Many a doctor with a Castle "T-V" Spotlight for intra-oral work relies on a commercial lighting fixture for general illumination in his operating room. Usually these commercial fixtures do not supply the proper quality or quantity of light around the dental chair.

The "G-V" (General Vision) Light was especially designed for doctor's offices. It gives proper shadow-reducing light all over the doctor's working area plus fine general room lighting. It reduces eye strain and supplies a soft restful light without glare. Ask your dealer for the complete story of this fine quality shadow-reducing "day and night" light.

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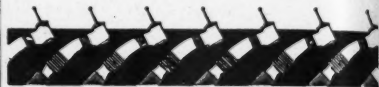
*A text book for the general practitioner  
. . . and for the man who specializes.*

**Price, \$10**

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**THE DENTAL DIGEST** 1005 Liberty Ave.  
Pittsburgh, Pa.

## Contra- Angles



### Call for Help . . .

If you have a spare instrument or a piece of equipment that you haven't used for years, you might like to know that by shipping it off to the Medical and Surgical Relief Committee of America, 420 Lexington Avenue, New York City, you would be supplying material that would be helpful to some fighting man. Although the armed forces are well able to supply themselves with dental materials and equipment, other vital war agencies are not in such favorable position. The Merchant Seamen, for example, have no Dental Corps. Men in this important activity depend largely on civilian dentists.

A significant organization has been founded in New York City wherein twenty-two women dentists have become part of the Women's Hospital Reserve Corps to give free dental service to merchant seamen of the United Nations who dock in the city of New York. Doctor Josephine Abelson is the chairman of this committee. Recently she searched the warehouses of the Medical and Surgical Relief Committee to select dental instruments and supplies from the salvaged stock. These instruments had been donated by the dentists of the country and reconditioned by expert workmen.

The committee for this worthwhile activity is making another appeal to the dentists of this country. Will you go through the nooks and crannies of your office to do this service: salvage from accumulated collections some instruments to donate to the Medical and Surgical Relief Committee of America? Don't send junk! Be reasonably sure that the instruments will have some value and can be reconditioned. Again, the address

"The tooth, the whole tooth... and the gums!"



# LINGUAL BRUSHING

## with the D. D. TOOTH BRUSH

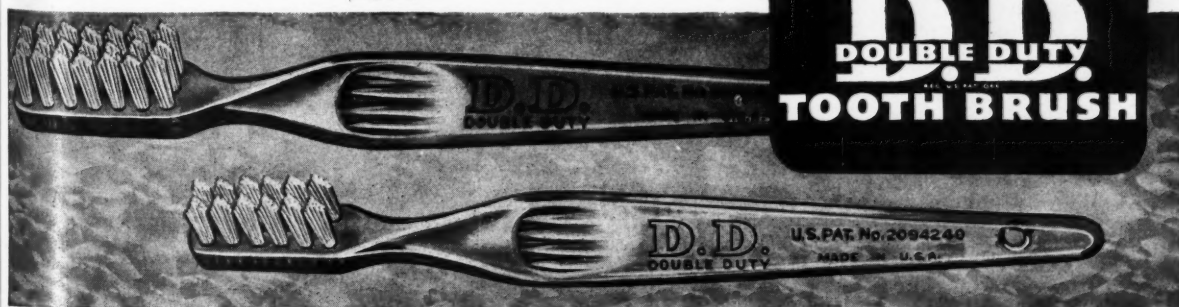
THE D. D. Tooth Brush makes it easier for the patient to really brush those so often neglected lingual tooth surfaces. The unique twist of the D. D. Tooth Brush handle permits more correct placing of the brushhead on even hard-to-reach lingual planes.

—which over 1000 dentists helped design—manages to penetrate to every accessible tooth area. Its compact brushhead, flexible resilience of bristles, and carefully spaced tufts all make the D. D. Tooth Brush a scientific and modern aid to oral hygiene. Available in either the two row, or three row type.

As a matter of fact the D. D. Tooth Brush

**Bristol-Myers Company, 630 Fifth Ave., N.Y.C.**

Dept. 2





# COOL—even on hot days

Friction produces heat—and that presents a problem when it comes to cleaning teeth.

If too much pressure on the polisher is required to get teeth clean, consequent heat may burn the gums.

The inventor did not forget this fact when he designed BS Polishers.

Cleverly moulded to hold the right amount of cleaner and secure a resultful abrasive action under light pressure, BS Polishers run smooth and cool—as they clean. Discovery of this superiority contributed its share to the fact BS Polishers are first choice of dentists throughout America.

**YOUNG DENTAL MFG. CO.** 4958 Suburban R. W.  
ST. LOUIS MO.

is the Medical and Surgical Relief Committee of America, 420 Lexington Avenue, New York City.

## Attention World Travelers . . .

The Army Map Service department is looking for topographical maps of

foreign countries; foreign city plans; guide books; travel folders containing city plans; gazetteers; survey notes and maps; aerial photographs; atlases; encyclopedias with city plans or maps.

If readers have such material from the days of their foreign travel, they are asked to lend it for the duration or donate the collection to the government. It is suggested that before sending a collection a description of the material be sent to the New York Library Branch, Army Map Service, Room 820, 1270 Sixth Avenue, New York, 20, New York, in the care of Viohla Klipell, Head of the Branch.



• Let us send you this informative booklet about the Plastic Porcelain you can buy when and as you need it.

## HAVE YOU TRIED AMES PLASTIC PORCELAIN?

Dentists are attracted by the fact that Ames Plastic Porcelain is available at the "quantity price" in single units of powders and liquids. Then they find that it also embodies a greater number of desirable clinical properties than any other they have used. Give it a trial and see how it will enhance the quality and appearance of your work on anterior tooth areas. Powder, 1/2-oz. any color, \$2.00; Liquid, 14 cc, \$1.00.

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p a n y, Fre-  
mont, Ohio.  
**DENTAL CEMENTS**

## Friends in Our Defense . . .

Following the publication of Walter Jacobs' good natured article, WHAT MAKES DENTISTS UNPOPULAR, we had a couple of our friends scurry to our defense. Walter properly scolded the editors of this magazine for the weird picture that appeared on the May cover. Apparently some of the boys did not agree with our friend Walter for saying that the cover was putrid. Here are a couple of the letters that were written in our defense:

"Dear Sir: I can see no valid reason why you should feel the necessity of apologizing for the picture shown on the cover of the May issue of THE DENTAL DIGEST.

"In the first place, it is strictly a dental magazine intended to be seen and read by

dentists only, and should be kept in the private office of the dentist. Second, modern dentists must have thought well of the cover picture and felt no comments were particularly necessary. Unfortunately they are in the minority and that undoubtedly explains why you received so many letters criticizing the picture. Obviously those dentists who convey the impression to the patient that dentistry is merely the selling of dental materials and more or less of a mechanical procedure found it necessary to voice their objection.

"To the mass production dentist this picture may not be typical of operative procedure, but that is not adequate reason why it should not be. When one visits the average dental office and observes the lack of sterilization and asepsis, the shoddy methods of office practice, the great harm done to patients by these procedures, it is sometimes difficult to be proud of the dental profession and more difficult to be proud of one's colleagues. These are the reasons 'why more of the people of his tribe didn't come, for advice and treatment' and not the distaste for good scientific care as implied by Doctor Jacobs.

"In his attempt to discredit the picture, Doctor Jacobs did not actually approach it from a scientific point of view.... Not only does Doctor Jacobs call an innocent child a 'dope' but depreciates the dental assistant. It is entirely within the realm of possibility that the dental assistant is capable of handling the routine affairs of the office as well as serving as an operative assistant. Or, it may be, that the dentist of the picture maintains two assistants with divided responsibilities. Whichever may be the case, this dentist wisely accepts a fact that has been widely recognized by the dental profession for years: that a competent and efficient dental assistant is indispensable to good operative procedure.

"Another point of censure was that the dentist wore a mask while operating on the patient despite the fact that 'this particular operator evidently has a cold.' Concern for the health of the patient alone should be sufficient to dictate this precaution, to say nothing of the element of courtesy.

"Another unjust criticism is that of the rubber dam, which does not 'cover the eyes.' When the author derides this device, he is pointing the way to lack of care, lack of skill, incompetence, and the desire to give volume dentistry at the expense of healthful quality dental service.

"Finally, Doctor Jacobs has failed to consider the full import of the child's using a mirror to watch the operation. This clearly establishes the fact that the child has confidence in his dentist, for he knows that the dentist is perfectly willing for him to watch the entire operation. I have no doubt that this dentist (and he would be one of the very few) had given the child a real instructive talk on dental health and had whetted his curiosity. Most certainly, no good dentist should be ashamed, or have anything to fear, in allowing his patients watch his operation.

"What our profession needs and needs badly are more dentists of the order pictured on the cover of THE DENTAL DIGEST. Then we would not carry the stigma of merchandising, of being only skilled mechanics, or being called tooth carpenters; but the profession will be known as an integral part of the healing art, a wonderful profession whose power to do good cannot be excelled." — George A. Swendiman, D.D.S., Grand Forks, North Dakota.

LET'S BRUSH UP ON IPANA AS A DENTIFRICE



# E

## FFICIENT

—NO TOOTH PASTE IS MORE EFFECTIVE THAN

IPANA IN KEEPING TEETH AT THEIR SPARKLING BEST. IPANA brightens teeth as much as their natural whiteness permits...smoothly, gently, with absolutely no scratching. The mouth feels clean, sweet, highly refreshed.

◀ IPANA and Massage send rich red blood circulating through gingival capillaries and help improve local nutrition. Boggy gums tend to become firm, healthy, better able to resist pathogenic organisms. Send for literature.



# IPANA

TOOTH PASTE

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## "GOOD SEAS to you, Sailor"

"May your seabag be full of good luck"; but we know that these lads need more than luck. They need guns, ships, planes, and the many other things of war. And their *luck* will depend upon how plentifully these things are supplied.

Dentistry is a vital part of the production line that must produce these things. The dental health of millions of workers on the home front must be cared for by a greatly decreased number of dentists, which means longer and harder days for dentists throughout the land. McKesson nitrous oxide pain control is conserving both time and operator's energy in thousands of these busy practices.

It will be to your advantage to plan *now* for the future by becoming acquainted with the time-saving and the operating advantages of McKesson pain control.

NARGRAF



EASOR

EUTHESOR

"Dear Sir: At the risk of seeming to have a chip on my shoulder, I wish to take strenuous exception to the ideas and insinuations expressed in your column, which I have heretofore found so interesting and enlightening, under the title, **WHAT MAKES DENTISTS UNPOPULAR**, by Walter Jacobs. If you had relinquished any responsibility for these ideas, I would overlook this, but you cite these ideas as being in line with the reaction of dentists at large.

"I could pass up the whole thing as a bad case of a dentist going entirely out of his field and trying to be a comedian, except for the attack Jacobs makes on the rubber dam, and that's going a little too far, because any honest dentist will agree with Doctor Jim Prime, who has said, that if he were in a strange city in need of dentistry, all he would have to do would be to go to the dental supply house and discover what dentists in the city use the most rubber dam, and he would be safe in the hands of any one of them.

"It's unfortunate that Doctor Jacobs can't sell his idea to the dental schools, who are wasting a lot of time and effort teaching the neophytes to apply the rubber dam, or it may be that the dental schools cherish and intend to preserve the fact that American dentistry excels, by far, throughout the world.

"Jacobs mentions a 'conglomeration' of dentist's fists, assistant's paws, hand mirror, handpiece, bur, rubber dam, rubber dam holder, contra-angle, and air syringe, as things to strike horror in a dental patient. I maintain that all these things in the hands of a capable and skillful dentist, with present day dental means and methods, need not frighten anyone. The one way to make dentistry popular is to use all these things plus a great deal of patient education in an effort to save as many teeth as possible, and save them for a long period of time, and if Jacobs has a better instrument with which to educate the dental patient than the hand mirror, he should write a book on it.

"If and when, patients of men who use the rubber dam are inflicted with socialized dentistry, so-called, they are going to be very skeptical. It is in such an era when offices who know how to use a rubber dam are going serenely along enjoying a private practice, while the 'smart guys,' may be on the Hyser-Pepper assembly line.

"I don't wish to imply by this that the rubber dam user takes longer to do a good job of operative dentistry; on the contrary, the few minutes it takes to apply it, is saved many times over by the patient's not having to spit every two minutes, or tell all about their family troubles, or their operation, or what some other person did to them, and give the dentist an opportunity to talk dental education all the time. After all, that's what the patient is paying his good money for, and believe it or not, that's all he is interested in at that particular time if he were only given half a chance.

"We are going to be confronted with a good many Hyser-Pepper brainstorms from now on and we had better be getting very earnest about our dentistry and leave the comics to Robert Benchley and others who make their living at it.—Xen. Kakouros, D.D.S., Erie, Pennsylvania.

### Reader Reaction . . .

One of the pleasures of editing is that there is no way of anticipating

## AMMONIACAL SILVER NITRATE and FORMALIN

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A standard drug in dental therapeutics.



Provides a simple method for control of dental caries.

★

The solution never varies in purity.

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Always in chemical balance.

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Always fresh in ampoules.

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After opening, an ampoule can be tightly sealed and will retain its chemical balance and metallic silver content until the last drop is used.

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THE DENTAL DIGEST



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That comfortable feeling of working on a relaxed patient . . . That extra hour saved by painless operating . . . That certainty of profound and reliable anesthesia with Novocain-Cobefrin for all average procedures, or Novocain-Pontocaine-Cobefrin for longer duration.

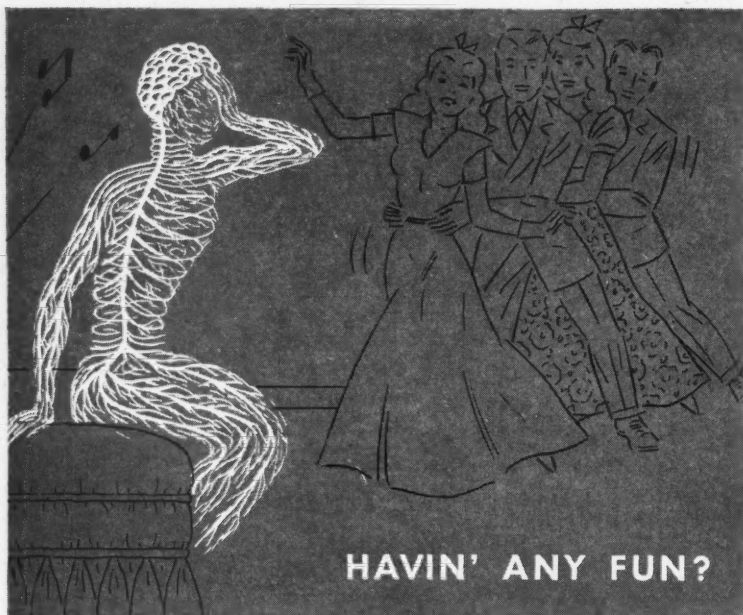


**COOK-WAITE NOVOCAIN-COBEFRIN**  
OR  
**NOVOCAIN-PONTOCAINE-COBEFRIN**

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COBEFRIN, NOVOCAIN, PONTOCAINE: Reg. Trademarks, Winthrop Chemical Co., Inc.



Hours after some patients leave a dental office, they are still a *bundle of nerves*—unable to relax, incapable of diversion. The melody doesn't linger on; it's the persistent memory of fear and pain. Psychology-wise dentists avoid dental dread, assuage fear and alleviate pain with dependable, efficacious Minimax Procaine Solutions. Physical and mental comfort result from judicious employment of Minimax anesthetic—make operative procedure less eventful, more pleasant to dentists and patients alike.

Ever-ready for instant use, Minimax solutions come to you in the patented Hy-Vac package—the vacuumized container that's dust-proof, damp-proof, wholly oxygen free. Build confidence and relax with Minimax.

Prepared in 3 strengths: Epinephrin, 1:30000, and 1:50000 and 1:70000. Supplied in two size cartridges, large for standard syringes, small for short syringes. 25 cts. in each Hy-Vac package.

Hy-Vac package patented U. S. Patent Number 2,215,479.



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reader reaction. Readers occasionally give us hell for something we thought was a good feature. At other times some unimportant, dull item brings forth spontaneous and enthusiastic response.

In the journals of a democracy, the editor publishes all points of view. This creates reader interest and reader response. Totalitarian publications print only one side of any subject. This one-ness of view in time becomes boring even to the proponents of the totalitarian system. All readers like the ebbs and flows, the changing views, differing opinions and controversy. The mistake that the "dental reformers" made at one time was to think that dental journals could be written to a formula and squeezed into a pattern. What makes publications valuable and of interest is the quality of being different from the others in the field; the appeal to all different kinds of people under all different circumstances.

### Speaking of Publications . . .

*Editor and Publisher*, the trade publication of journalists, recently carried a squawk from a small town editor who complained that the mayor of the city and the city council of his town decided on important business at closed executive meetings. This editor contended that there were regular public meetings but that the proceedings there were generally of a routine nature and that the life and blood policy was dictated in secret conclaves without the light of open discussion.

Such a complaint might likewise be made of dental societies. We are asked to get up and pass on resolutions and motions, the background of which is often shrouded in mystery. Then there is the subject of financial statements. We are told of the balance on hand or the income and expense items but we are not permitted to know very well how these items are broken down. The House of Delegates of the American Dental Association is asked to pass on projects, committee reports, and resolutions without knowing the entire picture of what has been going on be-

(Continued on page 411)

hind the scenes. There are frequently jockeyings within the Board of Trustees which would be interesting to know.

Maybe I am wrong; but I cannot recall that I have ever seen a financial statement published in the *Journal of the American Dental Association*, in the Affairs of the Association department. It is true that this information may be had by writing to the office of the Association or by reading the Transactions. It might be well for us, however, to follow the practice of the American Medical Association in this regard. Although the American Medical Association does not give the detailed cent-by-cent expenditures and income, the Association publishes enough of a financial statement for all members of the American Medical Association to know in general terms, at least, what is going on financially.

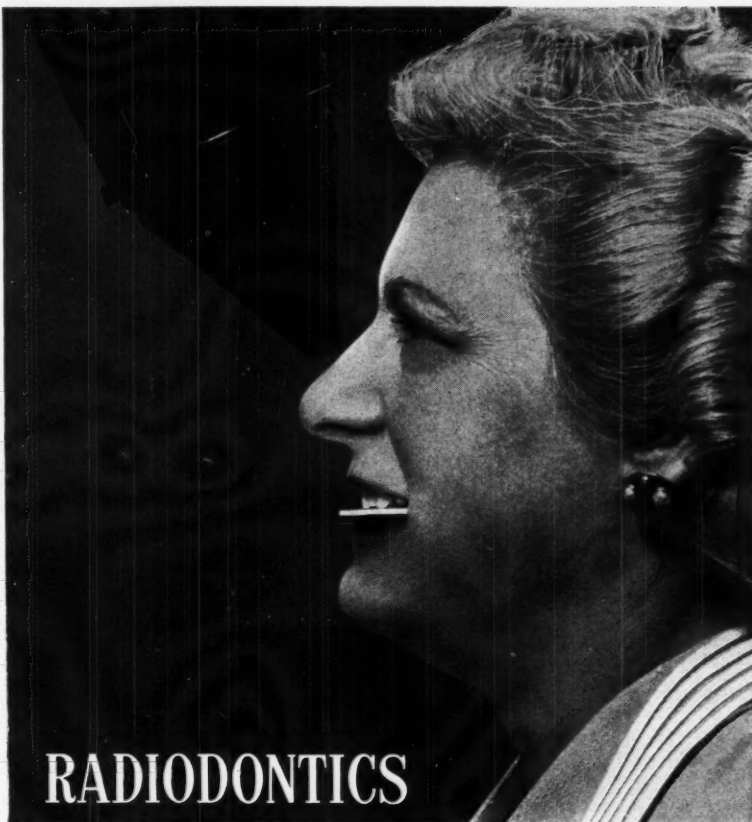
Willard Ogle, militant editor of the *Texas Dental Journal* has recently expressed apprehension over some of the travel expenses of the committees of the A.D.A. Willard is of the opinion that with the two dollar increase in dues of the American Dental Association, some of the spenders have gone hog-wild and have tried to see how fast they can spend this money. Willard Ogle represents the kind of editors we need in a democratic society. The small town newspaper editor cited who kicked about the activities of the city council is expressing democracy. We need more and more people who will turn the white light of publicity in dark corners.

Nobody has accused committeemen or society officials of dishonesty—far from it. Most of them are conscientious, honest fellows who frequently give a great deal of their time and their own money to promote the good interests of dentistry. That is certainly true of the officials of the American Dental Association. They should not, however, place themselves in the dubious position of not telling the dues-paying members of the Association the full story of policies, procedures, finance.

#### Travel Rationing

The Office of Defense Transportation has asked that convention travel be reduced to the minimum. Mr.

SEPTEMBER, 1943



## Indispensable aid to efficient wartime dentistry

IN these days of wartime pressure your patients are bound to be in a hurry. Therefore it's more important today than ever to use radiodontics. Show patients how it saves their time . . . and yours. Demonstrate—especially to those formerly unable to afford adequate dental care—how effectively today's radiographs can prevent tomorrow's toothaches.

Eastman's contribution to wartime dentistry is its complete line of dental x-ray films: *Bite-Wing*, *Periapical*, *Occlusal*, *Extra-Oral* . . . in the sizes and with the characteristics preferred by the profession . . . all so dependable that you can safely adopt swift, standardized exposure and processing technique. Order from your regular dental dealer. . . Eastman Kodak Company, Medical Division, Rochester, N. Y.

**Made together to work together . . .** For the best possible results at all times with Eastman Films: (1) have your dealer deliver



fresh Eastman Chemicals, liquid or powder, at regular intervals; (2) when you receive them, have your assistant replace all stale solutions.

*The great majority of all dental radiographs*

*are made on EASTMAN FILM*



## In your ORAL HYGIENE this month

### THIS IS THE ARMY, DOCTOR BROWN!

This is the title of the leading article in September ORAL HYGIENE. A Dental Corps lieutenant reveals the metamorphosis of a civilian dentist deep in the heart of Texas. The author is pretty blunt about "the dilemma of the Army dentist," in his relationship with Medical Corps officers.

**"Collect Your Accounts Today"** is the advice of I. H. Kline, who is a well-known credit man.

**"The Dentist with Millions to Administer"** is Doctor Emory W. Morris, general director of the Kellogg Foundation. Doctor Stanley C. Brown tells about him.

**"The Score of Discrimination"** and **"The Score of Accomplishment"** are a pair of pages in which graphs picture the status of Army dentists—and their accomplishment, in the face of the discrimination under which they work.



**"Don't be Pals to Your Patients!"** warns a dentist's wife, whose husband's practice prospered when he stopped being like that.

**"Beveridge is Not Bunk,"** insists forthright Doctor John W. Cooke, who believes the Beveridge plan merits study by dentists.

**"How to Kill a Dental Practice,"** this month's picture page, drives home the unwisdom of using old envelopes for record-keeping.

Seven departments appear this time—including "Ask ORAL HYGIENE," and "Military News," and "Editorial Comment," and "Dentists in the News," and "Technique of the Month," and "Laffodontia," and "The Corner."

Eastman contends that this kind of traveling has interfered with traveling for essential war business. There really isn't much sense in hundreds and thousands of conventioners cluttering the hotels and stations and taking transportation reservations for the purpose of discussing and carousing for a few days.

The Illinois State Dental Society has recently hit on an idea of carrying its meetings to its members rather than have the members journey to a central convention point. In late October, the Illinois State Dental Society is sponsoring a Postgraduate Assembly on War Medicine and Surgery to be held in Rock Island (October 25); East St. Louis (October 27); Decatur (October 29). The program will be conducted by a traveling troupe which will go from one town to the other. Rather than having several hundred dentists travel long distances, it will be necessary to have only eight or ten people make the circuit. The conventioners will be out of their offices a shorter time; they will spend less money, and will not tax the transportation facilities.

This manner of bringing the mountain to Mahomet might very well be followed by other dental societies.

The courses to be offered by this Postgraduate Assembly are to be given in cooperation with Brigadier General John M. Willis, Commanding General, Medical Replacement Center, Camp Grant. The subjects covered will be the following:

1. War Surgery, including the treatment of shock and hemorrhage; the use of the sulfa and penicillin drugs, and the treatment of fractures.
2. War Medicine, including tropical diseases; military sanitation; military psychiatry; aviation medicine.
3. Oral and Plastic Surgery in War.

All members of the American Dental Association in the immediate vicinity are invited. The advance registration fee of \$5.00 should be sent to the secretary of the Illinois State Dental Society, Doctor L. H. Jacob, Jefferson Building, Peoria, Illinois. When sending in the registration fee, please indicate in which city the registrant expects to attend the meeting.  
—E. J. R.

## In Your September

# Oral Hygiene

## DENTAL MEETING

# Dates

American Society of Oral Surgeons and Exodontists, annual meeting, Cincinnati, Ohio, October 8-9.

The University of Buffalo Dental Alumni Association, forty-second annual meeting, Hotel Statler, Buffalo, October 19-21.

Montreal Dental Club, nineteenth annual fall clinic, Mount Royal Hotel, Montreal, October 20-21.

Postgraduate Assemblies on War Medicine and Surgery, Illinois State Dental Society, Fort Armstrong Hotel, Rock Island, October 25; Broadview Hotel, East St. Louis, October 27; Orlando Hotel, Decatur, October 29.

New York Society of Orthodontists, regular meeting, New York City, November 8-9.

Ohio State Dental Society, annual meeting, Cleveland, November 7-10.

Rhode Island Dental Society, annual meeting, Providence, January, 1944.

California State Board of Dental Examiners, regular meeting, October 25 at San Francisco; November 29 at Los Angeles. For information write to Doctor Kenneth I. Nesbitt, 515 Van Ness Avenue, San Francisco.

New Jersey State Board of Dental Examiners, regular meeting, Trenton, June 28-July 2. For information write to Doctor J. Frank Burke, 150 East State Street, Trenton.



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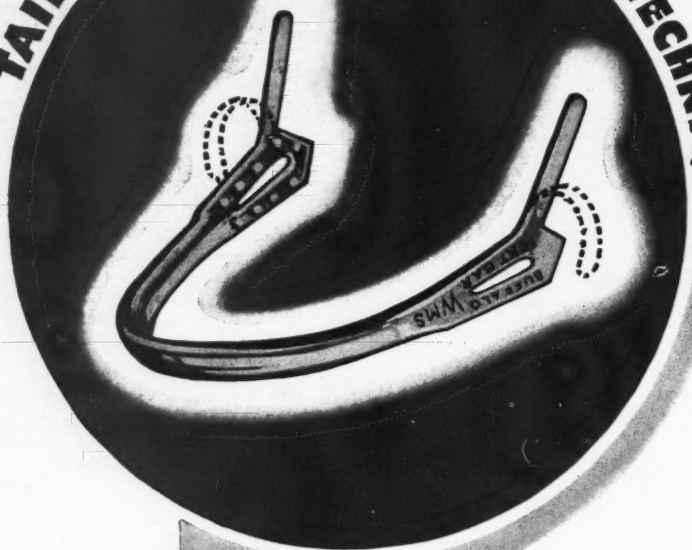


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The Tennessee State Dental Association, sixty-sixth annual meeting, Hotel Andrew Jackson, Nashville, November 21-24.

The Florida State Board of Dental Examiners, annual meeting, Seminole Hotel, Jacksonville. November 29 through December 2. For information write to Doctor L. D. Pankey, Sec'y.,

138 Alhambra Circle, Coral Gables.

Ohio State Board of Dental Examiners, regular meeting, Western Reserve School of Dentistry, Cleveland, October 18-20; and at the Ohio State University College of Dentistry, Columbus, November 29-December 1. For information write to Doctor Earl D. Lowry, Secretary, 79 East State Street, Columbus.

Vermont State Board of Dental Examiners, regular meeting, Montpelier, June 28-30. For information write to Doctor C. I. Taggart, 139 Bank Street, Burlington.

The Greater Philadelphia Dental Society, annual meeting, Benjamin Franklin Hotel, Philadelphia, February 2-4, 1944.

Women's Dental Society of New York, regular meeting, Hotel Pennsylvania, New York City, Wednesday evening, October 20.

New Jersey State Board of Dental Examiners, regular meeting, Trenton, January 10-15, 1944. For information write to Doctor J. F. Burke, Acting Secretary, 150 East State Street, Trenton.

The Connecticut Dental Commission, regular meeting, Hartford, December 7-11. For information write to Doctor C. G. Brooks, Recorder, 302 State Street, Hartford.



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